

# PATENT SPECIFICATION

813,230



Date of Application and filing Complete Specification: May 7, 1957.

No. 14536/57.

Complete Specification Published: May 13, 1959.

Index at acceptance:—Class 87(2), A1R67.

International Classification:—B29j.

## COMPLETE SPECIFICATION

### Improvements in or relating to Apparatus for the Planting Out of Seedlings and the like

I, GEORGE HENRY WALTERS, a British subject, of 152A, Brighton Road, Lancing, Sussex, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to apparatus for the planting out of seedlings and the like.

Usually when seedlings or small plants are pricked out from the seed boxes in which the seed has been germinated, they are planted in small flower pots. They are left for a relatively short period which may be a matter of from a few days to a few weeks in these pots, and then are finally planted out either in bigger pots or else out of doors according to the kind of plant which is being dealt with. In the second planting out, it is important that the roots of the young plant should be disturbed as little as possible and to this end it is quite a frequent practice to break the pot in order to remove the plant from it without breaking up the ball of soil about its roots.

This ball of soil and the plant are then carefully replanted wherever the plant is finally required. It will be appreciated that this is a somewhat extravagant procedure since even though a small plant pot is quite cheap, the number concerned is likely to be very large.

It is an object of the present invention to provide apparatus by means of which the first pricking out or thinning out of plants may be done without the use of any plant pots whatsoever, thereby not only saving the cost arising from the wastage of plant pots by breakage, but also saving the cost of having the necessary stock of plant pots.

It will be appreciated that in the specification, reference to plants and seedlings may be to any kind of plants and seedlings and reference to soil will include reference to any fibrous materials or moulds which are used as growing media for plants.

According to the invention apparatus for the planting out of seedlings or the like in a

[Price 3s. 6d.]

shaped mass of consolidated soil is provided which comprises a hollow open-ended former to receive the soil and a consolidating tool to fit within said former, said consolidating tool having one end formed as a substantially plane surface with an extension substantially centrally thereof, and having the other end opening into a central recess of a size to accommodate a seedling or the like planted in the soil and having a consolidating surface to engage the soil in the region where this abuts the internal surface of the former.

In order that the invention may be clearly understood, an embodiment thereof will now be described by way of example with reference to the accompanying diagrammatic drawings, in which

Figs. 1 to 6 show the sequence of operations in using the invention to plant out a seedling, and

Fig. 7 shows a perspective view of the apparatus according to the invention.

In the drawings, in Fig. 1 the whole open ended former 1 is shown resting upon a solid surface 2. The former is filled with loosely packed soil 3, as shown in Fig. 2 and this is then consolidated as indicated in Fig. 3 by the use of the consolidating tool 4. One end of this is provided with a substantially plane surface 5 and has an extension 6 substantially centrally thereof which, when the tool is used to consolidate the soil 3 in the former 1, produces a depression 7 centrally of the surface 8 of the soil in the former.

A plant or seedling 9 is now placed within the depression 7 as shown in Fig. 4. The consolidating tool is reversed and the soil is again consolidated in the manner shown in Fig. 5. The plant or seedling 9 is accommodated within a recess 10 within the consolidating tool and thereby escapes damage, whilst the end surface 11 of the consolidating tool presses upon the soil in the region adjacent the walls of the former 1. By this means the soil within the former is compressed in such a fashion that the recess in its upper surface 7 is filled

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and the plant is firmly embedded within the mass of soil. At the same time, the edge regions of the mass of soil, that is the regions which are adjacent the walls of the former, are consolidated and compressed more tightly than the remaining soil within the former, thereby to assist in maintaining the mass of soil coherent. When the soil has been adequately consolidated the former 1 is loosened from about the soil whilst the consolidating tool 4 is still pressed against the upper surface thereof, and finally both the former 1 and the consolidating tool are removed.

The plant 9 is then left embedded within a firm mass of soil 3 of the form shown in Fig. 6. It may be left in this state for a short period of from a few days to a week or two until it is desired to plant out the seedling in its final position, when, providing the mass 3 is carefully handled, it may be finally planted without any disturbance to the soil immediately surrounding the roots of the plant. It will be appreciated that the mass of soil 3 will be more coherent if the soil is of, or contains additives which are of, a rather fibrous nature. Since it is the general practice when planting out seedling to use soil which contains at least a proportion of leaf mould or fibre, the soil will usually have a sufficient fibre content.

In Fig. 7 there is illustrated in an exploded perspective one suitable embodiment of the former and consolidating tool. The former is an open-ended cylinder. This may be an asbestos fibre cement moulding or may be made in any fashion from any suitable material. The consolidating tool 4 consists essentially of a cylinder having one open end 12, and one closed end 13, the closed end carrying an axial extension 6 in the manner shown. The consolidating tool may again be made of any suitable materials and may easily

be constructed from iron pipe or alternatively may be made an integral casting in iron or similar material.

It will be appreciated that it is not necessary that the former and consolidating tool should be of cylindrical form; they may be square or of any other desired shape. They will also be of a size appropriate to the size and kind of plants which are to be dealt with.

WHAT I CLAIM IS:—

1. Apparatus for the planting out of seedlings or the like in a shaped mass of consolidated soil which comprises a hollow open-ended former to receive the soil and a consolidating tool to fit within said former, said consolidating tool having one end formed as a substantially plane surface with an extension substantially centrally thereof, and having the other end opening into a central recess of a size to accommodate a seedling or the like planted in the soil and having a consolidating surface to engage the soil in the region where this abuts the internal surface of the former.

2. Apparatus according to claim 1 wherein the former and consolidating tool are of substantially cylindrical form.

3. Apparatus according to claim 1 or 2 wherein the consolidating tool comprises a cylinder having one open end and one closed end, the closed end being provided with the extension substantially centrally thereof, extending outwardly therefrom.

4. Apparatus for the planting out of seedlings or the like in a shaped mass of consolidated soil substantially as hereinbefore specifically described with reference to the accompanying diagrammatic drawings.

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Leamington Spa: Printed for Her Majesty's Stationery Office, by the Courier Press.—1959.  
Published by The Patent Office, 25, Southampton Buildings, London, W.C.2, from which  
copies may be obtained.

